REMARKS

In this communication, Applicants have amended Claims 1, 4-6 and 43, and canceled Claims 2 and 3. No new matter is introduced. Claims 1, 4-16, 22-25, 31-32 and 37-45 are pending. Allowance of all elected pending claims is respectfully requested.

In the Office Action of January 26, 2005, the Examiner set forth a number of grounds for objection and rejection. These grounds are addressed individually and in detail below.

Election/Restrictions

The Office Action indicated that Claims 1-16, 22-25, 31-32 and 43-45 were pending. Applicants respectfully submit that the Examiner failed to mention that Claims 37-42, although withdrawn from consideration, are still pending in the application. Accordingly, Claims 1, 4-16, 22-25, 31-32, and 37-45 are currently pending and Claims 1, 4-6 and 43 are currently under examination.

Rejections under 35 U.S.C. § 101

Claims 1-6 stand rejected under 35 U.S.C. § 101 for reasons stated on page 3 of the Office Action. Specifically, the Examiner asserts that the claims, as written, do not sufficiently distinguish over antibodies as they exist naturally because the claims do not particularly point out any non-naturally occurring differences between the claimed products and the naturally occurring products. Applicants have amended independent Claim 1 by inserting the word "isolated" before the word "antibody," as suggested by the Examiner. It is believed that the ground for the rejection has been obviated and withdrawal of the rejection under 35 U.S.C. § 101 is respectfully requested.

Rejections under 35 U.S.C. § 112

Claims 2-6 stand rejected under 35 U.S.C. § 112, second paragraph, as being vague and indefinite for reciting the term TSG101 as the sole means of identifying the claimed molecule. Claims 2-6 depend from Claim 1. Applicants have amended Claim 1 to further identify TSG101 by reciting the amino acid sequence of SEQ ID NO:1. It is believed that the ground for the rejection has been obviated and withdrawal of the rejection under 35 U.S.C. § 112, first paragraph, is respectfully requested.

Claims 1-3 and 43 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner alleges that (1) the specification only supports antibodies binding to the ubiquitination-regulating domain of human TSG101, but not antibodies binding to a polypeptide containing any ubiquitination-regulating domain, and (2) that the specification does not support antibodies to any functional fragment of a ubiquitinatio-regulating domain, e.g., amino acids 10-140, 20-140, etc.

In order to expedite prosecution, Applicants have amended Claim 1 to recited only the ubiquitination-regulating domain of human TSG101. As admitted by the Examiner in the Office Action, the written description in this case sets forth antibodies which bind to the ubiquitination-regulating domain of human TSG101. Applicants further submit that the specification provides ample support for antibodies binding to any functional fragment of the ubiquitination-regulating domain of human TSG101. For example, the specification provides the complete sequence of the ubiquitination-regulating domain of human TSG101 (page 24, last paragraph) and tested deletion mutants of human TSG101 (page 30, 2nd paragraph, and Figure 3a). With these information, one skilled in that art would be able to identify any functional fragment of the ubiquitination-regulating domain without undue experimentation. Moreover, the specification satisfies the written description requirement by providing a

sufficient number of species (i.e., the fragments listed on page 24, last paragraph of the specification) falling within the scope of the genus (i.e., the functional fragment of the ubiquitination-regulating domain of human TSG101). Accordingly, Applicants respectfully submit that, in view of the amended Claim 1, the specification satisfies the written description requirement. Withdrawal of the rejection under 35 U.S.C. § 112, first paragraph, is respectfully requested.

Rejections under 35 U.S.C. § 102

Claims 1-6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,891,668 to <u>Li et al.</u> (hereinafter "<u>Li</u>") for reasons stated on pages 6-7 of the Office Action. Claims 1-6 and 43 stand rejected under 35 U.S.C. § 102(b) as being anticipated by US Patent No. 5,892,016 to <u>Brie et al.</u> (hereinafter "<u>Brie</u>") for reasons stated on pages 7-8 of the Office Action. Applicants respectfully traverse the rejections.

For anticipation under 35 U.S.C. §102, the reference "must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present." (MPEP §706.02). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Independent Claim 1, as amended, is directed to an isolated antibody that binds specifically to a polypeptide comprising an ubiquitination-regulating domain, or a functional fragment thereof, of a human TSG101 protein comprising the amino acid sequence recited in SEQ ID NO:1.

Li generally describes antibodies to normal or mutated forms of human TSG101,

including antibodies to the coiled coil, leucine zipper and proline rich domains of the protein.

Brie generally describes the complete sequence of human TSG101 and antibodies that bind specifically to the polypepetide.

Applicants respectfully submit that <u>Li</u> and <u>Brie</u> describe a genus of antibodies that bind to the full length human TSG101, while the present invention discloses a species of that genus (i.e., antibodies to the ubiquitination-regulating domain of human TSG101). A genus does not always anticipate a claim to a species within the genus, if the species is not specifically taught (MPEP, 2131.02). Since neither <u>Li</u> nor <u>Brie</u> disclose the ubiquitination-regulating domain of human TSG101, one skilled in the art would not be able to "at once envisage" antibodies binding to the ubiquitination-regulating domain based on the teachings of <u>Li</u> or <u>Brie</u>. Accordingly, the species claimed in the present invention is not anticipated by the genus described in <u>Li</u> or <u>Brie</u>.

Moreover, binding to the ubiquitination-regulating domain is not an inherent characteristics of the antibodies of <u>Li</u> or <u>Brie</u>. Inherency may not be established by probabilities or possibilities. The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient. <u>In re Rijckaert</u>, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) and MPEP 2112 IV. To establish inherency, the Examiner has to demonstrate that the missing descriptive matter must be **necessarily present** in the prior art. <u>In re Robertson</u>, 49 USPQ2d 1949, 1950-1951 (Fed. Cir. 1999). In the instant case, antibodies to the ubiquitination-regulating domain is not necessarily present in antibodies that bind to the full length TSG101. The mere fact that some anti-TSG101 antibody may bind to the ubiquitination-regulating domain is not enough to establish inherency.

Taken together, Applicants respectfully submit that <u>Li</u> or <u>Brie</u> does not teach or suggest antibodies that bind to the ubiquitination-regulating domain of human TSG101.

Withdrawal of the rejections under 35 U.S.C. § 102(b) is respectfully requested.

Double patenting rejection

Claims 1-6 stand rejected over U.S. Patent No. 6,835,816 to Cohen et al. (the '816

patent) for double patenting. Briefly, the Examiner alleges that the claims of the '816 patent,

which are directed to antibodies that bind to the full length mouse or human TSG101, would

anticipate antibodies that bind to the ubiquitination-regulating domain of human TSG101.

Applicants have filed a terminal disclaimer to obviate the ground of the rejection.

Withdrawal of the double patenting rejection is respectfully requested.

Conclusion

In view of the foregoing remarks, favorable reconsideration of all pending claims is

requested. Applicants respectfully submit that this application is in condition for allowance

and requests that a notice of allowance be issued. Should the Examiner believe that anything

further is required to expedite the prosecution of this application or further clarify the issues,

the Examiner is requested to contact Applicants' representative at the telephone number listed

below.

Respectfully submitted,

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FULL TEXT OF CASES (USPQ2D)
All Other Cases

Verdegaal Brothers Inc. v. Union Oil Company of California (CA FC) 2 USPQ2d 1051 Verdegaal

Brothers Inc. v. Union Oil Company of California

U.S. Court of Appeals Federal Circuit 2 USPQ2d 1051

> Decided March 12, 1987 No. 86-1258

Headnotes

PATENTS

1. Patentability/Validity -- Anticipation -- Prior art (§ 115.0703)

Federal district court erred in denying patent infringement defendant's motion for judgment n.o.v., in view of evidence demonstrating that claims for making urea-sulfuric acid fertilizer, including claims that reaction be conducted in "heat sink" of recycled fertilizer to prevent high temperature buildup, were anticipated by prior art patent that specifically detailed process for making such urea-sulfuric acid products and that explicitly taught that base or "heel" of recycled fertilizer can be used to make more of product, even if patentee of prior art did not recognize that heel functioned as heat sink, since heat sink property was inherently possessed by heel.

Particular patents -- Fertilizers

4,310,343, Verdegaal and Verdegaal, Process for Making Liquid Fertilizer, holding of validity and infringement reversed.

Case History and Disposition:

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Appeal from District Court for the Eastern District of California, Coyle, J.

Action by Verdegaal Brothers Inc., William Verdegaal, and George Verdegaal, against Union Oil Company of California, and Brea Agricultural Services Inc., for patent infringement. From decision denying defendants' motion for judgment notwithstanding the verdict, defendants appeal. Reversed.

Attorneys:

Andrew J. Belansky of Christie, Parker & Hale (David A. Dillard, with him on the brief), all of Pasadena, Calif., for appelants.

John P. Sutton of Limbach, Limbach & Sutton (Michael E. Dergosits, with him on the brief), all of San Francisco, Calif., for appellees.

Judge:

Before Markey, Chief Judge, and Davis and Nies, Circuit Judges.

Opinion Text

Opinion By:

Nies, Circuit Judge.

Union Oil Company of California and Brea Agricultural Services, Inc. (collectively Union Oil) appeal from a judgment of the United States District Court for the Eastern District of California, No. CV-F-83-68 REC, entered on a jury verdict which declared U.S. Patent No. 4,310,343 ('343), owned by Verdegaal Brothers, Inc., "valid" and claims 1, 2, and 4 thereof infringed by Union Oil. Union Oil's motion for judgment notwithstanding the verdict (JNOV) was denied. We reverse.

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BACKGROUND

The General Technology

The patent in suit relates to a process for making certain known urea-sulfuric acid liquid fertilizer products. These products are made by reacting water, urea (a nitrogencontaining chemical), and sulfuric acid (a sulfur-containing chemical) in particular proportions. The nomenclature commonly used by the fertilizer industry refers to these fertilizer products numerically according to the percentages by weight of four fertilizer constituents in the following order: nitrogen, phosphorous, potassium, and sulfur. Thus, for example, a fertilizer containing 28% nitrogen, no phosphorous or potassium, and 9% sulfur is expressed numerically as 28-0-0-9.

The Process of the '343 Patent

The process disclosed in the '343 patent involves the chemical reaction between urea

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and sulfuric acid, which is referred to as an exothermic reaction because it gives off heat. To prevent high temperature buildup, the reaction is conducted in the presence of a nonreactive, nutritive heat sink which will absorb the heat of reaction. Specifically, a previously-made batch of liquid fertilizer -- known as a "heel" -- can serve as the heat sink to which more reactants are added. Claims 1 and 2 are representative:

- 1. In a process for making a concentrated liquid fertilizer by reacting sulfuric acid and urea, to form an end product, the improvement comprising:
- a. providing a non-reactive, nutritive heat sink, capable of dissipating the heat of urea and sulfuric acid, in an amount at least 5% of the end product,
- b. adding water to the heat sink in an amount not greater than 15% of the end product, c. adding urea to the mixture in an amount of at least 50% of the total weight of the end product.
- d. adding concentrated sulfuric acid in an amount equal to at least 10% of the total weight of the end product.
- 2. The process of claim 1 wherein the heat sink is recycled liquid fertilizer.

Procedural History

Verdegaal brought suit against Union Oil in the United States District Court for the Eastern District of California charging that certain processes employed by Union Oil for making liquid fertilizer products infringed all claims of its '343 patent. Union Oil defended on the grounds of noninfringement and patent invalidity under 35 U.S.C. §§102, 103. The action was tried before a jury which returned a verdict consisting of answers to five questions. Pertinent here are its answers that the '343 patent was "valid" over the prior art, and that certain of Union Oil's processes infringed claims 1, 2, and 4 of the patent. None were found to infringe claims 3 or 5. Based on the jury's verdict, the district court entered judgment in favor of Verdegaal.

Having unsuccessfully moved for a directed verdict under Fed. R. Civ. P. 50(a), Union Oil timely filed a motion under Rule 50(b) for JNOV seeking a judgment that the claims of the '343 patent were invalid under sections 102 and 103. The district court denied the motion without opinion.

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ISSUE PRESENTED

Did the district court err in denying Union Oil's motion for JNOV with respect to the validity of claims 1, 2, and 4 of the '343 patent?

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Standard of Review

When considering a motion for JNOV a district court must: (1) consider all of the evidence; (2) in a light most favorable to the non-moving party; (3) drawing all reasonable inferences favorable to that party; (4) without determining credibility of the witnesses; and (5) without substituting its choice for that of the jury's in deciding between conflicting elements of the evidence. *Railroad Dynamics, Inc. v. A. Stucki* Co., 727 F.2d 1506, 1512-13, 220 USPQ 929, 936 (Fed. Cir.), *cert. denied*, 469 U.S. 871 [224 USPQ 520] (1984); *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1546, 220 USPQ 193, 197 (Fed. Cir. 1983). A district court should grant a motion for JNOV only when it is convinced upon the record before the jury that reasonable persons could not have reached a verdict for the nonmoving party. *Railroad Dynamics*, 727 F.2d at 1513, 220 USPQ at 936; *Connell*, 722 F.2d at 1546, 220 USPQ at 197.

To reverse the district court's denial of the motion for JNOV, Union Oil must convince us that either the jury's factual findings are not supported by substantial evidence, or, if they are, that those findings cannot support the legal conclusions which necessarily were drawn by the jury in forming its verdict. See Perkin-Elmer Corp. v. Computervision Corp., 732 F.2d 888, 893, 221 USPQ 669, 673 (Fed. Cir.), cert. denied, 469 U.S. 857 [225 USPQ 792] (1984). Railroad Dynamics, 727 F.2d at 1512, 220 USPQ at 936. Substantial evidence is more than just a mere scintilla; it is such relevant evidence from the record taken as a whole as a reasonable mind might accept as adequate to support the finding under review. Consolidated Edison Co. v. NLRB, 305 U.S. 197, 229 (1938); Perkin-Elmer, 732 F.2d at 893, 221 USPQ at 673; SSIH Equip. S.A. v. U.S. Int'l Trade Comm'n, 718 F.2d 365, 371 n.10, 218 USPQ 678, 684 n.10 (Fed. Cir. 1983). A trial court's denial of a motion for JNOV must stand unless the evidence is of such quality and weight that reasonable and fair-minded persons in the exercise of impartial judgment could not reasonably return the jury's verdict. Envirotech Corp. v. Al George, Inc., 730 F.2d 753, 758, 221 USPQ 473, 477 (Fed. Cir. 1984).

Our precedent holds that the presumption of validity afforded a U.S. patent by 35

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U.S.C. § 282 requires that the party challenging validity prove the facts establishing invalidity by clear and convincing evidence. *American Hoist & Derrick Co. v. Sowa & Sons, Inc.*, 725 F.2d 1350, 1360, 220 USPQ 763, 770 (Fed. Cir.), *cert. denied*, 469 U.S. 821 [224 USPQ 520] (1984). Thus, the precise question to be resolved in this case is whether Union Oil's evidence is so clear and convincing that reasonable jurors could only conclude that the claims in issue were invalid. *See Perkin-Elmer*, 732 F.2d at 893, 221 USPO at 673; *Railroad Dynamics*, 727 F.2d at 1511, 220 USPQ at 935.

Anticipation

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. See, e.g., Structural Rubber Prods. Co. v. Park Rubber Co., 749 F.2d 707, 715, 223 USPQ 1264, 1270 (Fed. Cir. 1984); Connell, 722 F.2d at 1548, 220 USPQ at 198; Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 771, 218 USPQ 781, 789 (Fed. Cir. 1983), cert. denied, 465 U.S. 1026 [224 USPQ 520] (1984). Union Oil asserts that the subject claims of the '343 patent are anticipated under 35 U.S.C. § 102(e) 1 by the teachings found in the original application for U.S. Patent No. 4,315,783 to Stoller, which the jury was instructed was prior art.

From the jury's verdict of patent validity, we must presume that the jury concluded that Union Oil failed to prove by clear and convincing evidence that claims 1, 2, and 4 were anticipated by the Stoller patent. See Perkin-Elmer, 732 F.2d at 893, 221 USPQ at 673; Railroad Dynamics, 727 F.2d at 1516, 220 USPQ at 939. Under the instructions of this case, this conclusion could have been reached only if the jury found that the Stoller patent did not disclose each and every element of the claimed inventions. Having reviewed the evidence, we conclude that substantial evidence does not support the jury's verdict, and, therefore, Union Oil's motion for JNOV on the grounds that the claims were anticipated should have been granted.

The Stoller patent discloses processes for making both urea-phosphoric acid and urea-sulfuric acid fertilizers. Example 8 of Stoller specifically details a process for making 30-0-0-10 urea-sulfuric acid products. There is no dispute that Example 8 meets elements b, c, and d of claim 1, specifically the steps of adding water in an amount not greater than 15% of the product, urea in an amount of at least 50% of the product, and concentrated sulfuric acid in an amount of at least 10% of the product. Verdegaal disputes that Stoller teaches element a, the step of claim 1 of "providing a non-reactive, nutritive heat sink." As set forth in claim 2, the heat sink is recycled fertilizer. 2 The Stoller specification, beginning at column 7, line 30, discloses:

Once a batch of liquid product has been made, it can be used as a base for further manufacture. This is done by placing the liquid in a stirred vessel of appropriate size, adding urea in sufficient quantity to double the size of the finished batch, adding any water required for the formulation, and slowly adding the sulfuric acid while stirring. Leaving a heel of liquid in the vessel permits further manufacture to be conducted in a stirred fluid mass.

This portion of the Stoller specification explicitly teaches that urea and sulfuric acid can be added to recycled fertilizer, i.e., a heel or base of previously-made product. Dr. Young, Union Oil's expert, so testified. Verdegaal presented no evidence to the contrary. Verdegaal first argues that Stoller does not anticipate because in Stoller's method sulfuric acid is added slowly, whereas the claimed process allows for rapid addition. However, there is no limitation in the subject claims with respect to the rate at which sulfuric acid is added, and, therefore, it is inappropriate for Verdegaal to rely on that distinction. See SSIH, 718 F.2d at 378, 218 USPQ at 689. It must be assumed that slow addition would not change the claimed process in any respect including the function of the recycled material as a heat sink.

Verdegaal next argues that the testimony of Union Oil's experts with respect to what

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Stoller teaches could well have been discounted by the jury for bias. Discarding that testimony does not eliminate the reference itself as evidence or its uncontradicted disclosure that a base of recycled fertilizer in a process may be used to make more of the product.

[1] Verdegaal raises several variations of an argument, all of which focus on the failure of Stoller to explicitly identify the heel in his process as a "heat sink." In essence, Verdegaal maintains that because Stoller did not recognize the "inventive concept" that the heel functioned as a heat sink, Stoller's process cannot anticipate. This argument is wrong as a matter of fact and law. Verdegaal's own expert, Dr. Bahme, admitted that Stoller discussed the problem of high temperature caused by the exothermic reaction, and that the heel could function as a heat sink. 3 In any event, Union Oil's burden of proof was limited to establishing that Stoller disclosed the same process. It did not have the additional burden of proving that Stoller recognized the heat sink capabilities of using a heel. Even assuming Stoller did not recognize that the heel of his process functioned as a heat sink, that property was inherently possessed by the heel in his disclosed process. and, thus, his process anticipates the claimed invention. See In re Oelrich, 666 F.2d 578, 581, 212 USPO 323, 326 (CCPA 1981); In re Swinehart, 439 F.2d 210, 212-13, 169 USPO 226, 229 (CCPA 1971). The pertinent issues are whether Stoller discloses the process of adding urea and sulfuric acid to a previously-made batch of product, and whether that base would in fact act as a heat sink. On the entirety of the record, these issues could only be resolved in the affirmative.

On appeal Verdegaal improperly attempts to attack the status of the Stoller patent as prior art, stating in its brief:

Verdegaal also introduced evidence at trial that the Stoller patent is not prior art under 35 U.S.C. §§ 102(e)/103. Professor Chisum testified that the Stoller patent, in his opinion, was not prior art. . . . This conclusion finds support in *In re Wertheim*, 646 F.2d 527 [209 USPO 554] (CCPA 1981), and 1 Chisum on Patents §3.07[3].

Appellee Brief at 27 (record cite omitted). Seldom have we encountered such blatant distortion of the record. A question about the status of the Stoller disclosure as prior art did arise at trial. Union Oil asserted that, even though the Stoller patent issued after the '343 patent, Stoller was prior art under section 102(e) as of its filing date which was well before the filing date of Verdegaal's application. Professor Chisum never testified that the Stoller patent was *not* prior art, but rather, stated that *he did not know* whether it was prior art. An excerpt from the pertinent testimony leaves no doubt on this point:

Q. (Mr. Sutton): And do you know whether the Stoller patent is prior art to the application of the Verdegaal patent?

A. (Prof. Chisum): I don't know that it is, no.

We find it even more incredible that Verdegaal would attempt to raise an issue with respect to the status of the Stoller patent given that the case was submitted to the jury with the instruction that the original Stoller patent application was prior art. 4 Verdegaal made no objection to that instruction below, and in its appeal briefs, the instruction is cavalierly ignored.

In sum, Verdegaal is precluded from arguing that the Stoller patent should not be considered prior art. See Fed. R. Civ. P. 51; Weinar v. Rollform Inc., 744 F.2d 797, 808, 223 USPQ 369, 375 (Fed. Cir. 1984), cert. denied, 105 S.Ct. 1844 (1985); Bio-Rad

Laboratories, Inc. v. Nicolet Instrument Corp., 739 F.2d 604, 615, 222 USPQ 654, 662 (Fed. Cir.), cert. denied, 469 U.S. 1038 (1984). 5

After considering the record taken as a whole, we are convinced that Union Oil established anticipation of claims 1, 2, and 4 by clear and convincing evidence and that no reasonable juror could find otherwise. Consequently, the jury's verdict on validity is unsupported by substantial evidence and

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cannot stand. Thus, the district court's denial of Union Oil's motion for JNOV must be reversed.

Conclusion

Because the issues discussed above are dispositive of this case, we do not find it necessary to reach the other issues raised by Union Oil. 6 In accordance with this opinion, we reverse the portion of the judgment entered on the jury verdict upholding claims 1, 2, and 4 of the '343 patent as valid under section 102(e) and infringed.

REVERSED

Footnotes

Footnote 1. Section 102(e) provides:

A person shall be entitled to a patent unless--

. . . .

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent

. . .

Footnote 2. Claim 4 is written in terms of approximate percentages of all reactants by weight of the end product. No argument is made that the process of claim 4 would result in a fertilizer product any different from that disclosed by Example 8 of Stoller.

Footnote 3. There is no dispute that the percentage of heel described in Stoller meets the percentage of heat sink required by the claims.

Footnote 4. The jury instruction read:

Stoller filed two patent applications -- an original application on October 30th, 1978, and a second on February 7th, 1980. Under the patent laws, the claims of the 343 patent are invalid if you find that the original application (Exhibit BL) anticipates the process claimed in the 343 patent.

Footnote 5. Union Oil also argues that Verdegaal's counsel misled the jury by its closing rebuttal argument:

ut I think it's important to keep in mind that [Stoller] couldn't have been a prior patent because it issued a month after the Verdegaal patent had issued.

We disapprove of Verdegaal's tactic which would form the basis for a grant of a motion for a new trial but for our conclusion that outright reversal of the ruling on the motion for JNOV is in order.

Footnote 6. It should not be inferred that all of these issues were properly before us. Union Oil appears to assume that on appeal it may dispute the resolution of any *issue* which is denominated an "issue of law" even though it was not raised in its motion for JNOV. This is incorrect. *See Railroad Dynamics*, 727 F.2d at 1511, 220 USPQ at 934.

- End of Case -

ISSN 1526-8535

FULL TEXT OF CASES (USPQ2D)
All Other Cases

In re Rijckaert (CA FC) 28 USPQ2d 1955 In re Rijckaert

U.S. Court of Appeals Federal Circuit 28 USPQ2d 1955

Decided November 23, 1993 No. 93-1206

Headnotes

PATENTS

1. Patentability/Validity -- Obviousness -- Relevant prior art -- Particular inventions (§ 115.0903.03)

Board of Patent Appeals and Interferences erred by affirming rejection, on grounds of obviousness, of claims for apparatus to record and reproduce electric signal on magnetic record carrier, since references relied upon to reject claims do not provide basis for prima facie determination of obviousness, in that prior art relied upon, either individually or when combined, does not disclose, suggest, or render obvious claimed invention, and since applicant's burden to rebut rejection of obviousness does not arise until prima facie case has been established.

Case History and Disposition:

Page 1955

Appeal from the U.S. Patent and Trademark Office, Board of Patent Appeals and Interferences.

Application for patent, serial no. 07/345,396, filed by Albert M.A. Rijckaert and Joannes A.E. Van Der Kop. From decision affirming final rejection of claims, applicants appeal. Reversed.

Attorneys:

Edward W. Goodman (Algy Tamoshunas, with him on brief), Tarrytown, N.Y., for appellant.

Lee E. Barrett, associate solicitor, PTO (Fred E. McKelvey, solicitor, with him on brief), for appellee.

Judge:

Before Lay, senior circuit judge (Eighth Circuit, sitting by designation), and Mayer and Lourie, circuit judges.

Opinion Text

Opinion By:

Lourie, J.

Albert Rijckaert and Joannes van der Kop ("Rijckaert") appeal from the decision of the United States Patent and Trademark Office (PTO) Board of Patent Appeals and Interferences affirming the final rejection of claims 5-12, all of the pending claims in patent application serial no. 07/345,396, as being unpatentable under 35 U.S.C. Section 103 (1988). Because the references relied upon to reject the claims do not provide the basis for a *prima facie* determination that the claimed invention would have been obvious, we reverse.

BACKGROUND

The patent application at issue relates to an apparatus for recording and reproducing an electric signal on a magnetic record carrier. Independent claim 11 is drawn to a recording apparatus and it specifies a relationship between time expansion or compression and three variables a, n, and M. Claim 11 reads, in pertinent part:

11. An apparatus for recording an electric signal on a magnetic record carrier in tracks which are inclined relative to the longitudinal direction of said record carrier, comprising: . . .

. . . . [a] time-base correction circuit provid [ing] a time expansion or time compression of the signal blocks by a factor of a*n/(180*(M+1)), where a is the

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wrapping angle of the record carrier around the head drum and differs from 180 degrees, n is the number of head pairs, and M is the number of times within a specific time interval that a head pair which comes in contact with the record carrier during said time interval does not record a signal on the record carrier, said time interval being defined by those instants at which two consecutive track pairs are recorded by one or two head pairs. Independent claim 12 is drawn to an apparatus for reproducing a recorded signal and it recites the reciprocal

relationship between time compression or expansion and the three variables a, n, and M. Dependent claims 5-10 further limit claims 11 or 12.

The Board upheld the final rejection of claims 5 and 7-12 under 35 U.S.C. Section 103 as being unpatentable over U.S. Patent 4,757,392 to Awamoto in view of Driessen et al., *An Experimental Digital Video Recording System*, CE-32 I.E.E.E. Transactions on Consumer Electronics 3, Aug. 1986, at 362-70. The Board also upheld the final rejection of claim 6 as being unpatentable over Awamoto and Driessen in view of U.S. Patent 4,542,417 to Ohta.

DISCUSSION

We review *de novo* the Board's ultimate determination of obviousness. *In re De Blauwe*, 736 F.2d 699, 703, 222 USPQ 191, 195 (Fed. Cir. 1984). Underlying factual inquiries, such as the scope and content of the prior art, differences between the prior art and the claimed invention, and level of ordinary skill in the art are reviewed for clear error. *See In re Caveney*, 761 F.2d 671, 674, 226 USPQ 1, 3 (Fed. Cir. 1985).

In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant. *Id.* "A *prima facie* case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art." *In re Bell*, 991 F.2d 781, 782, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)). If the examiner fails to establish a *prima facie* case, the rejection is improper and will be overturned. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

All of the claims except claim 6 stand rejected under 35 U.S.C. Section 103 as being obvious over Awamoto in view of Driessen. 1 Awamoto, the primary reference, discloses a signal processing circuit for a video recording and reproducing apparatus. Awamoto specifically discloses the time expansion of an input signal by a factor of two and the corresponding time compression of an output signal in a manner inverse to that of the time expansion. Further, Awamoto uses two video heads mounted on a rotary drum "of any of a well known video tape loading mechanism such that [the heads] follow parallel tracks skewed relative to the length of video tape." Driessen discloses a recording system using two pairs of heads mounted on piezo-ceramic actuators. The Board concluded that the subject matter of the claims would have been obvious over Awamoto in view of Driessen, stating that "the time expansion or time compression relationship is satisfied for the expansion of two disclosed [in] Awamoto when a wrapping angle of 360 degrees, one pair of heads and no non-recording intervals are assumed." The Board further asserted that the recognition of the claimed relationship between time expansion/compression and the three variables a, n, and M is "the mere discovery of a relationship that is applicable to [a] prior art apparatus[, and] does not [give] rise to a patentable invention." Thus, in affirming the rejection, the Board first assumed that the claim limitation at issue, the relationship between time expansion/compression and the three variables, was somehow "inherent" in the prior art as shown by Awamoto. The Board also assumed specific values for the claimed variables in order to assert that Awamoto's device satisfies the claimed relationship.

[1] Rijckaert argues that the examiner has not established a *prima facie* case of obviousness and that the examiner's assumptions do not constitute the disclosure of prior art. We agree. Awamoto does not disclose the wrapping angle of the record carrier around the head drum or the number of times that a head pair which comes in contact with the record carrier does not record a signal on the record carrier. Nor does Awamoto discuss the claimed relationship of the three

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variables to time expansion/compression. 2 Driessen, the secondary reference, is relied upon only to teach the provision of a pair of write beads having a mechanically rigid coupling to each other and does not remedy the

deficiencies of Awamoto. Thus, the prior art relied upon does not disclose, suggest, or render obvious the claimed invention, either individually or when combined.3

Awamoto does not describe the use of time expansion and compression as a means of optimally filling tracks, much less suggest that the three variables of the claims are even a factor in determining the amount of time expansion or time compression. Rather, Awamoto is concerned primarily with processing a high-quality broadcast television signal for use in conventional video machinery, and with compensating for errors introduced to such a signal by a transfer circuit. The Commissioner's assertion "that the [analysis discussed in his brief] and Awamoto demonstrate that the relationship was, in fact, well known in the art" is unavailing. While the court appreciates the Commissioner's thorough explanation of the claimed relationship in his brief, the Commissioner's brief is not prior art. The prior art is Awamoto, and it does not indicate that the relationship is well known in the art nor does it suggest the claimed relationship. See In re Yates, 663 F.2d 1054, 211 USPQ 1149, 1151 (CCPA 1981) (when the PTO asserts that there is an explicit or implicit teaching or suggestion in the prior art, it must indicate where such a teaching or suggestion appears in the reference).

To support the Board's affirmance of the rejection, the Commissioner points out that in the recording art, the exact matching of signal time to recording time is an optimal condition, and that this condition would be met by fulfilling the claimed relationship. While the condition described may be an optimal one, it is not "inherent" in Awamoto. Nor are the means to achieve this optimal condition disclosed by Awamoto, explicitly or implicitly. "The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient [to establish inherency.]" *In re Oelrich*, 666 F.2d 578# 581-82, 212 USPQ 323, 326 (CCPA 1981) (citations omitted) (emphasis added). "That which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown." *In re Spormann*, 363 F.2d 444, 448, 150 USPQ 449, 452 (CCPA 1966). Such a retrospective view of inherency is not a substitute for some teaching or suggestion supporting an obviousness rejection. *See In re Newell*, 891 F.2d 899, 901, 13 USPQ2d 1248, 1250 (Fed. Cir. 1989).

Rijckaert also argues that the rejection of dependent claim 6 as being obvious over Awamoto and Driessen in view of Ohta is improper. Ohta discloses an apparatus for compensating for signal loss in a single-head video recorder using a time compression factor of 3/5 (a signal of time period 5t/4 is compressed into a track of time period 3t/4) so that a signal is recorded completely during the time period that it takes the recording head to scan the magnetic tape. Regarding the Ohta patent, the examiner stated, "Ohta was only relied upon to support the idea that other compression factors are used in the prior art. . . ." 4 The relationship between the time expansion/compression and the three variables recited in the claims from which claim 6 depends, which is absent in the combination of Awamoto and Driessen, is not supplied by Ohta. Thus, we agree that the rejection of claim 6 under Section 103 is improper for the reasons set forth above with respect to the other claims.

While the Commissioner criticizes Rijckaert's arguments regarding the Section 103 rejections, the burden to rebut a rejection of obviousness does not arise until a *prima facie* case has been established. In the case before us, it was not.

CONCLUSION

The decision of the United States Patent and Trademark Office Board of Patent

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Appeals and Interferences affirming the final rejection is reversed. REVERSED

Footnotes

Footnote 1. The claims stand or fall together since no separate argument for patentability has been made for each claim.

Footnote 2. The Commissioner admits that other limitations recited in claims 11 and 12 are not found in Awamoto; however, those limitations were not argued before the Board or this court. Thus, we agree with the Commissioner that those limitations are not at issue here.

Footnote 3. The Board also noted that the claims are not "specific" in that they claim the three variables as a "factor" of the expansion or compression time. The Board stated, "claims 11 and 12 fail to say which of expansion time or compression time is factored by the variables, how or when one of the two times is selected based on the variables or how each of the two times is related to the variables." The Board further stated, "the relationship is probably satisfied by any prior art video tape recording and reproducing apparatus that otherwise satisfies the remaining requirements of the claims at bar." While the Board's position implies a possible rejection based upon 35 U.S.C. Section 112, this issue is not before us. In any event, the statement that the relationship is "probably satisfied" by the prior art is speculative and therefore does not establish a *prima facie* case of unpatentability. Footnote 4. The Board did not specifically address the rejection of claim 6; therefore, claim 6 was considered to be affirmed for the reasons stated by the examiner. *See* 37 C.F.R. Section 1.196(a) (1993).

- End of Case -

FULL TEXT OF CASES (USPQ2D) All Other Cases

In re Robertson (CA FC) 49 USPQ2d 1949 In re Robertson

U.S. Court of Appeals Federal Circuit 49 USPQ2d 1949

Decided February 25, 1999 No. 98-1270

Headnotes

PATENTS

1. Patentability/Validity -- Anticipation -- In general (§ 115.0701)

Element of claim is not "inherent" in disclosure of prior art reference unless extrinsic evidence clearly shows that missing descriptive matter is necessarily present in thing described in reference, and that it would be so recognized by persons of ordinary skill; inherency may not be established by mere probabilities or possibilities, and mere fact that certain thing may result from given set of circumstances is not sufficient.

2. Patentability/Validity -- Anticipation -- Identity of elements (§ 115.0704)

Board of Patent Appeals and Interferences improperly rejected application claim for fastening and disposal system for diapers on ground that prior reference inherently contained all elements of claim, since board failed to recognize that third mechanical fastening means of application claim, used to secure diaper for disposal, was separate from and independent of two other means used to attach diaper to wearer, and since board's theory that two fastening devices in reference were capable of being intermingled to perform same function as third and first fastening elements in application claim rests upon mere probability or possibility that is insufficient to establish inherency.

Case History and Disposition:

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Appeal from the U.S. Patent and Trademark Office, Board of Patent Appeals and Interferences.

Patent application of Anthony J. Robertson and Charles L. Scripps, serial no. 08/171,484 (fastening and disposal system for diapers). Applicants appeal from rejection of application claim 76 on grounds of anticipation and obviousness. Reversed; Rader, J., concurring in separate opinion.

Attorneys:

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Linda Moncys Isacson, associate solicitor, Albin F. Drost, acting solicitor, and John M. Whealan, associate solicitor, U.S. Patent and Trademark Office, Arlington, Va., for appellee.

Judge:

Before Newman, circuit judge, Friedman, senior circuit judge, and Rader, circuit judge.

Opinion Text

Opinion By:

Friedman, S.J.

This appeal challenges the decision of the Board of Patent Appeals and Interferences

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(Board) that claim 76 in the appellants' patent application was anticipated by and obvious over United States Patent No. 4,895,569 (the Wilson patent). We reverse.

Both claim 76 and Wilson involve fastening and disposal systems for diapers. In both, the body of the diaper features a small front and a larger rear section. The outer edges of those sections are attached at the wearer's waist in the hip area. Once the diaper is soiled and then removed, the smaller front section is rolled up into the larger rear section and secured in this rolled-up configuration by fasteners.

The appellants' application is for "an improved mechanical fastening system for . . . disposable absorbent articles [i.e., diapers] that provides convenient disposal of the absorbent article." [J.A. 12] Claim 76 covers: [A] mechanical fastening system for forming side closures . . . comprising a closure member . . . comprising a first mechanical fastening means for forming a closure, said first mechanical fastening means comprising a first fastening element; a landing member . . . comprising a second mechanical fastening means for forming a closure with said first mechanical fastening means, said second mechanical fastening means comprising a second fastening element mechanically engageable with said first element; and disposal means for allowing the absorbent article to be secured in a disposal configuration after use, said disposal configuration, said third mechanical fastening means for securing the absorbent article in the disposal configuration, said third mechanical fastening means comprising a third fastening element mechanically engageable with said first fastening element . . .

Claim 76 thus provides for two mechanical fastening means to attach the diaper to the wearer and a third such means for securing the diaper for disposal.

The Wilson patent discloses two snap elements on fastening strips attached to the outer edges of the front and rear hip sections of the garment. The fastening strips may also include "secondary load-bearing closure means" -- additional fasteners to secure the garment; they may be identical to the snaps.

Wilson also states:

[D]isposal of the soiled garment upon removal from the body is easily accomplished by folding the front panel.. inwardly and then fastening the rear pair of mating fastener members... to one another, thus neatly bundling the garment into a closed compact package for disposal.

[JA 085 at col. 6, 11, 20-25]

In other words, Wilson does not provide a separate fastening means to be used in disposing of the diaper. Instead, it suggests that disposal of the used diaper may be "easily accomplished" by rolling it up and employing the same fasteners used to attach the diaper to the wearer to form "a closed compact package for disposal."

In holding that the invention claim 76 covers was anticipated by Wilson, the Board did not hold that Wilson set forth a third fastening means. Instead, it found that Wilson anticipated claim 76 "under principles of inherency." [J.A. 5] Applying the language of claim 76 to the operation of Wilson, it concluded that "an artisan would readily understand the disposable absorbent garment of Wilson... as being inherently capable of [making the secondary load-bearing closure means] (third fastening element) mechanically engageable with [the other snap fasteners on the fastening strip] (first fastening element)" [J.A. 5] -- i.e., using the secondary closure not with its mate, but with one of the primary snap fasteners. The Board summarily affirmed the examiner's alternative ruling that claim 76 would have been obvious in light of Wilson because "claim 76 lacks novelty." [J.A. 7]

Ш

Anticipation under 35 U.S.C. Section 102(e) requires that "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987).

A. The Wilson patent does not expressly include a third fastening means for disposal of the diaper, as claim 76 requires. That means is separate from and in addition to the other mechanical fastening means and performs a different function than they do. Indeed, Wilson merely suggests that the diaper may be closed for disposal by using the same fastening means that are used for initially attaching the diaper to the body.

[1] B. If the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if that element is "inherent" in its disclosure. To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that

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it would be so recognized by persons of ordinary skill." Continental Can Co. v. Monsanto Co., 948 F.2d 1264, 1268, 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." Id. at 1269, 20 U.S.P.Q.2d at 1749 (quoting In re Oelrich, 666 F.2d 578, 581, 212 U.S.P.Q. 323, 326 (C.C.P.A. 1981).

In finding anticipation by inherency, the Board ignored the foregoing critical principles. The Board made no attempt to show that the fastening mechanisms of Wilson that were used to attach the diaper to the wearer also "necessarily" disclosed the third separate fastening mechanism of claim 76 used to close the diaper for disposal, or that an artisan of ordinary skill would so recognize. It cited no extrinsic evidence so indicating.

[2] Instead, the Board ruled that one of the fastening means for attaching the diaper to the wearer also could operate as a third fastening means to close the diaper for disposal and that Wilson therefore inherently contained all the elements of claim 76. [J.A. 5] In doing so, the Board failed to recognize that the third mechanical fastening means in claim 76, used to secure the diaper for disposal, was separate from and independent of the two other mechanical means used to attach the diaper to the person. The Board's theory that these two fastening devices in Wilson were capable of being intermingled to perform the same function as the third and first fastening elements in claim 76 is insufficient to show that the latter device was inherent in Wilson. Indeed, the Board's analysis rests upon the very kind of probability or possibility -- the odd use of fasteners with other than their mates -- that this court has pointed out is insufficient to establish inherency.

Ш

The Board's entire discussion of obviousness was as follows: The rejection of claim 76 under 35 USC Section 103

We sustain the rejection of claim 76 under 35 USC Section 103. Above, we found that claim 76 lacks novelty. Lack of novelty is the ultimate of obviousness. See *In re Fracalossi*, 681 F.2d 792, 794, 215 USPQ 569, 571 (CCPA 1982). Thus, claim 76 is appropriately rejected under 35 USC Section 103 as being unpatentable.

The "lack of novelty" upon which the Board based its conclusion of obviousness, however, was its finding of anticipation. Our rejection of that finding eliminates the sole basis of the Board's obviousness determination, which therefore cannot stand. See In re Adams, 364 F.2d 473, 480, 150 U.S.P.Q. 646, 651 (C.C.P.A. 1966). In his brief the Commissioner argues:

Moreover, even if this court interprets claim 76 to require two separate fasteners to perform the closure and disposal functions, it would have been well within the knowledge of one of ordinary skill in the art to take Wilson's one fastener and make it into two separate fasteners. See [In re] Graves, 69 F.3d [1147,] 1152, 36 USPQ2d [1697,] 1701 [(Fed. Cir. 1995)] (When evaluating a reference, it is appropriate to consider the knowledge of a skilled artisan in combination with the teaching of the reference.). Accordingly, claim 76 would have been obvious to one of ordinary skill in the art, and the rejection should be affirmed by this Court.

That, of course, was not the ground on which the Board based its obviousness ruling. We decline to consider counsel's newly-minted theory as an alternative ground for upholding the agency's decision. See In re Soni, 54 F.3d 746, 751, 34 U.S.P.Q.2d 1684, 1688 (Fed. Cir. 1995) (citing In re DeBlauwe, 736 F.2d 699, 705 n.7, 222 U.S.P.Q. 191, 196 n.7 (Fed. Cir. 1984). The Board's obviousness ruling cannot be sustained on the ground given by the Board.

CONCLUSION

The decision of the Board of Patent Appeals and Interferences affirming the examiner's rejection of claim 76 as

anticipated by and obvious over the Wilson patent is

REVERSED .

Rader, J., concurring.

Robertson asserts that the prior art Wilson patent does not teach three elements of claim 76: a "third mechanical fastening means," a disposal means on the "outside surface" of the body portion, and end regions that are "in an overlapping configuration when worn." In reversing the Board, this court relies solely on the purported failure of Wilson to teach the third fastening means. Because I believe Wilson teaches such a means, but does not teach the other two limitations at issue, I concur.

In its analysis, this court assumes without discussion that the claimed "third mechanical fastening means" covers a separate third mechanical

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fastening means. This issue is key, for if the claim does not require a separate third fastening means, but instead allows the first fastening means to also serve as the third, then the prior art Wilson patent clearly teaches that element of the claim. For two reasons, this claim does not, to my eyes, require a separate third fastening means. First, the claim does not specifically recite a separate third fastening means. Second, because the claim is in means-plus-function form, this court consults the specification to identify structure. The specification explicitly teaches that the first and third fastening elements can be the same so long as they are complementary, as they are in Wilson. Accordingly, I agree with the Board that Wilson teaches the claimed "third fastening element." Wilson does not, however, teach either of the other two claim limitations at issue. As to the disposal means on the "outside surface" of the body portion, Wilson's figs. 12 and 13a-d show the disposal means on the inside of the body portion. As to the end regions that are "in an overlapping configuration when worn," Wilson explicitly teaches that the end regions should abut, not overlap, when worn. To overcome these teachings, the Board relied on the following statement in Wilson: "Further, the fastener members need not be previously mounted on a separate strip as shown then bonded . . . to the stretchable outer cover Multi-component snaps are available which may be applied directly to a stretchable outer cover material " Col. 7, l. 65 to col. 8, l. 3. The Board opined that applying snaps directly to the outer cover would result in both a disposal means on the "outside surface" and end regions "in an overlapping configuration when worn." Simply put, the Board has put more weight on this teaching than it can bear. It is far from clear what effect applying the snaps directly to the outer cover will have on the Wilson diaper configuration, let alone that it will result in a configuration satisfying the claim elements at issue. Accordingly, because I believe that the Board clearly erred in this interpretation of Wilson, I would reverse on this ground.

- End of Case -

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